Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A method for producing a porous ceramic structure, comprising:

a mixing and kneading step of mixing and kneading a clay material containing raw material particles and a pore-forming agent together with a dispersion medium at a reduced pressure pf -40000 Pa to -93000 Pa to obtain a clay;

a forming and drying step of forming the clay to obtain a formed ceramic body, and drying the formed ceramic body to obtain a dried ceramic body; and

a firing step of firing the dried ceramic body to thereby obtain the porous ceramic structure,

wherein as the pore-forming agent, hollow particles made of an organic resin are used, and as at least one type of the raw material particles, particles are used which contain 30 to 100 mass% of spherical particles having a circularity of 0.70 to 1.00 with respect to the total mass of the raw material particles.

2. (Original) The method for producing the porous ceramic structure according to claim 1, wherein the spherical particles have a circularity of 0.80 to 1.00.

3. (Previously Presented) The method for producing the porous ceramic structure according to claim 1, wherein the clay is formed into a honeycomb shape in which a large number of cells are defined and formed by partition walls.

4. (Previously Presented) The method for producing the porous ceramic structure according to claim 1, wherein the spherical particles are obtained by heating ceramic particles at a temperature in a range of a melting point (Tm) of a ceramic to Tm + 300°C.

5. (Previously Presented) The method for producing the porous ceramic structure according to claim 1, wherein the spherical particles are obtained by crushing the ceramic particles with a jet air current.

6. (Previously Presented) The method for producing the porous ceramic structure according to claim 1, wherein as the raw material particles, there are used cordierite ($2MgO \bullet 2Al_2O_3 \bullet 5SiO_2$) forming material particles composed of silica (SiO_2) particles, kaolin ($Al_2O_3 \bullet 2SiO_2 \bullet 2H_2O$) particles, alumina ($Al_2O_3$) particles, aluminum hydroxide ($Al(OH)_3$) particles and talc ($3MgO \bullet 4SiO_2 \bullet H_2O$) particles, and as at least one type of the silica (SiO_2) particles, the alumina (Al_2O_3) particles and the aluminum hydroxide ($Al(OH)_3$) particles, there are used particles which contain 30 to 100 mass% of the spherical particles with respect to the total mass of the particles.

7. (Original) The method for producing the porous ceramic structure according to claim 6, wherein the spherical particles are obtained by heating the silica (SiO_2) particles in flame at a temperature in a range of 1730 to 2030°C.

8. (Previously Presented) The method for producing the porous ceramic structure according to claim 6, wherein the spherical particles are the silica (SiO_2) particles having an average particle diameter of 5 to 50 μm.

9-12. (Canceled)

13. (Currently Amended) The method for producing the porous ceramic structure according to claim 1, wherein only 1-3 parts by mass of the ~~forming~~ pore-forming agent is added in 100 parts by mass of the raw material particles so as to achieve a porosity of the porous ceramics structure in a controlled range of 60-72 %.

14. (Previously Presented) The method for producing the porous ceramic structure according to claim 13, wherein the spherical particles have a circularity of 0.80 to 1.00.

15. (Previously Presented) The method for producing the porous ceramic structure according to claim 13, wherein the clay is formed into a honeycomb shape in which a large number of cells are defined and formed by partition walls.

16. (Previously Presented) The method for producing the porous ceramic structure according to claim 13, wherein the spherical particles are obtained by heating ceramic particles at a temperature in a range of a melting point (Tm) of a ceramic to Tm + 300°C.

17. (Previously Presented) The method for producing the porous ceramic structure according to claim 13, wherein the spherical particles are obtained by crushing the ceramic particles with a jet air current.

18. (Previously Presented) The method for producing the porous ceramic structure according to claim 13, wherein as the raw material particles, there are used cordierite ($2MgO \bullet 2Al_2O_3 \bullet 5SiO_2$) forming material particles composed of silica (SiO_2) particles, kaolin ($Al_2O_3 \bullet 2SiO_2 \bullet 2H_2O$) particles, alumina ($Al_2O_3$) particles, aluminum hydroxide ($Al(OH)_3$) particles and talc ($3MgO \bullet 4SiO_2 \bullet H_2O$) particles, and as at least one type of the silica (SiO_2) particles, the alumina (Al_2O_3) particles and the aluminum hydroxide ($Al(OH)_3$) particles, there are used particles which contain 30 to 100 mass% of the spherical particles with respect to the total mass of the particles.

19. (Previously Presented) The method for producing the porous ceramic structure according to claim 18, wherein the spherical particles are obtained by heating the silica (SiO_2) particles in flame at a temperature in a range of 1730 to 2030°C.

20. (Previously Presented) The method for producing the porous ceramic structure according to claim 18, wherein the spherical particles are the silica (SiO_2) particles having an average particle diameter of 5 to 50 μm.